Keyser (P. D.)

Neoplasm of the Lachrymal Gland.

By PETER D. KEYSER, A.M., M.D.,

Professor of Ophthalmology Medico-Chirurgical College, and Surgeon Will's Eye Hospital, Philadelphia.

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NEOPLASM OF THE LACHRYMAL GLAND.

Neoplasms of the lachrymal gland are of very rare occurrence, and great care is necessary in the examination of the same to be certain of the origin of the morbid growth. But whether it originates in the gland proper, or begins its existence in the neighboring tissues and passes into the gland by the natural process of contact and extension, can only be determined after the extirpation and by microscopical examination. The character of the tumor can only be ascertained by the same manner of examination.

The following two cases illustrate the two processes of origin as above mentioned, *i. e.*, that in the gland proper, and that external and affecting the gland secondarily.

The first case, Lydia Mayberry, aet., 55, came to me in May, 1877, with a lump, as she called it, growing from under the brow. The examination revealed a tumor of a flat almond shape fully 1½ inches long lying over the eyeball and protruding from under the brow. The eyeball was also protruding somewhat and pushed downward and inward, with its movements upward and outward restricted. This state of affairs, by her history, had been going on for several years, and without the least pain.

The tumor had a firm but elastic consistency, and the end of my finger could be carefully pushed in above and below it; and by its movement, feeling and position it could be diagnosed as the lachrymal gland very much increased in size. Pressure on the

growth as well as on the eyeball caused some pain. Nothing abnormal was to be seen on nor in the eyeball. V. $^{20}/_{XX}$.

Extirpation of the morbid growth was the only remedy to be recommended, and to which consenting, she was the following day etherized, and after an incision of about an inch in length was made along the outer edge of the brow through the skin and underlying tissue to the tumor, it was clearly seen by its characteristic appearances to be of glandular construction. By careful dissection the whole of the enlarged gland was removed, and found to be 1½ inches long by the same in depth, and twice the normal thickness.

The wound healed readily, but ptosis remained with some contraction of the tissue of the eyelid over the eyeball in the region of the wound.

The extirpated tumor was hardened and by microscopical examination was found to be an adenoid growth of the gland, the degenerative process springing from the centre while the outer or peripheral part appeared comparatively free from the alveolar cells, but containing large inflammatory cells.

I saw the patient two years ago and there had been no return of the morbid growth; the lid remaining as above described after the operation.

The second case, Frederick Koetzle, aged 47, a well-built and nourished German, came to my clinic in the Will's Eye Hospital, December, 1880, to have a swelling of the right upper lid examined, which he first noticed in October previously, and which had increased so that the eye could not now be opened as wide as the other.

The general appearance of the eye was one of puffiness of the upper lid, with a feeling as if the lachrymal gland was enlarged and protruding slightly from under the orbital ridge. On opening the lid very widely, with the ball rolled downward, a ful-

ness was seen projecting from the outer and upper fold of the conjunctiva. The pupil was slightly contracted. Vision $^{20}/_{xx}$. There was no pain of any account. At times a feeling of fullness only.

February 7, 1881, he complains of a rapid increase of the neoplasm, which now comes well out from under the supra-orbital arch, and is felt as a hard mass extending well over the eye-ball toward the inner canthus, and also down around the outer canthus. It does not have a glandular feeling, but that of a solid, firm mass, with the exception of one place of indentation or separation directly over the eye-ball, near the centre of the ridge. Vision reduced to $^{20}/_{xl}$. Ophthalmoscopic examination shows choroidal congestion only.

Local applications and inward treatment were tried faithfully, without any beneficial effect. By May following the morbid growth had increased so as to press the eye ball downward and inward, and there is an impossibility to raise the upper lid.

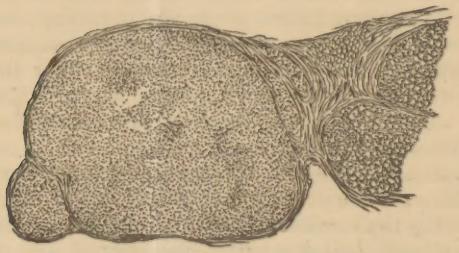
By careful palpation a hard substance could be felt extending all along the upper part of the orbit above the eye, and as far back as the finger could be pushed. There was some dull aching pain now accompanying it.

Extirpation being the only chance for relief, he was admitted into the hospital May 21, on which day the whole of the tumor was carefully removed without an anæsthetic, as it was found inexpedient to use any on account of heart trouble.

Examination of the part removed showed the lachrymal gland was entire, but much enlarged with new growths extending from either side; that toward the nasal side fully twice as large as the gland, and of a firm, solid consistency. A continuous fibrous capsule appeared to hold the whole together.

My friend Dr. Carl Seiler was kind enough to make a microscopical examination for me. After harden-

ing, a thin section throughout the tumor was made, which shows at one extremity an aggregation of small granular, round cells, held together by a delicate stroma, while the other shows the normal structure of the gland slightly infiltrated by inflammatory cells. There are no alveolar cells to be seen in the gland. The whole growth is surrounded by a capsule of clear, fibrous tissue.



The wound from the operation healed readily without suppuration, and the eye looked well for some time. But after awhile a secondary growth appeared and grew so rapidly that by October of the same year there was a tumor lying in the same place, but nearly twice the size of the former.

This was again removed Oct. 22, 1881, and a section prepared for the microscope shows no glandular structure, but small granular round cells throughout, and is not surrounded by a capsule. The tumors therefore must be considered as round-celled sarcomata, and originating external to the gland, but appears under its external lining capsule.

June 2, 1883, the patient returned to my clinic after an absence of 18 months to show me that there was another return of the morbid growth taking place on the outer side of the eye, covering the globe almost up to the edge of the cornea. It is a hard,

smooth, roundish tumor, apparently under the conjunctiva but not attached to the sclerotica. There is no actual pain attending it, only a dull feeling in bad weather. All the other parts surrounding the eye appear to be in good condition, except the inability to raise the lid. Vision reduced to $^{6}/_{24}$. D. ($^{20}/_{1\,x}$), while that in the L. E. is $^{6}/_{9}$. D. ($^{20}/_{xxx}$). The man is in good health and attends to his work every day.

The etiology and character of morbid growths of the lachrymal gland and its surrounding tissues is not different from those occurring in other glandular and muscular parts of the body. So seldom do injuries of this part take place that really there can be no cause ascribed to or suspected for the diseased growth.

When the neoplasm is confined entirely to the gland and does not extend into the neighboring tissue, the careful extirpation of the tumor or gland is really a permanent cure, no return of the growth taking place, as in the first case described. But when the origin is either external to the gland, or when in the gland and exuding therefrom into the surrounding tissue, a return is more or less likely to occur, as in the second case mentioned.

In the study of the literature of tumors of the lachrymal gland we find different forms of morbid growths described by the several writers, such as hypertrophy, adenoma, adenoid, colloid, sarcoma, myxoma, fungus, encephaloid, scirrhus, etc., but Prof. Becker claims that the adenoid form is the only one, and covers the first eight forms. (*See Graefe and Saemish, Handbuch der Augenheilkunde, pt. VII.*) I think he is not far from correct, for in an adenoid growth of the gland we have more or less some of the characteristics of at least five or six of the several forms above mentioned. As in my first case there was hypertrophy, alveolar cells, myxomatous cells, that is cavities filled with a gelatinous mass, etc. In cases of sarcoma, fungus, encephaloid, etc., I think the origin

is in the tissues external, and by proliferation extends into the gland (as in my second case), and may have been described as a primary instead of a secondary affection of the gland.

Many attempts at reducing these tumors by absorption with external and internal remedies have been made, but without success. Free and complete extirpation is the only thing to be done, and the earlier it is accomplished the better, and the greater likelihood of a permanent cure. Care must be taken to know thoroughly the anatomy of the part and eyeball, so that in the operation no injury will be caused to the globe, the optic nerve or ocular muscles.